

then there is in my present situation some satisfaction in going to the trees and gathering the ripe oranges whenever inclined to do so; and some pleasure also in watching the growth and development of leaves, fruit and flowers of strange tropical plants, all our own. Observing the vigor and rapidity of pushing forth of the banana's huge flower-stalk and the unfolding of its fruit, all so nicely arranged, no man at all mindful of the operations of nature can remain indifferent, cold and unmoved. This enormous activity cannot but gently remind him of a mighty power or powers working simultaneously within millions of cells—not a hap-hazard clash of atom against atom, which would end in inextricable confusion, but a working and weaving in unison, harmoniously and steadily, the crude material into objects of exquisite beauty and regularity; the plan adopted for each species vigorously followed up and adhered to in places thousands of miles apart, subject, however, now and then, to gradual modifications.

My new home is situated so as to bring me a little nearer town, is in a higher and drier locality, at the foot and in front of a prominent hill called "Belmont" on which a century ago the governors of the island loved to dwell in stately mansions, showing now nothing but the low remnants of a few ruined walls. This mountain when cleared of its high trees offers, no doubt, most splendid views on three sides. Towards the west it takes in the town of Port of Spain and its suburbs and a great extent of the Gulf of Paria; towards the north and east it exhibits the northern mountain ranges running out westward into a bold narrow strip, as well as the high promontories of the Venezuelan coast in the dim distance. Of late this once beautiful mountain has been altogether neglected, and suffered to run into a kind of wild bushy park; only on one side there is an open spot bare of trees, forming a kind of glade, and that is opposite to where I live, extending downwards to within ten yards of my front fence. I find this climate much more humid than that of Venezuela, and it takes all of a botanical collector's ingenuity to guard his dried specimens against the detrimental effects of dampness combined with high temperature. Even now in February, while trying to distribute my Ferns into sets, I sometimes have to gather them up in a hurry and lay them aside when a rain comes down without warning. I find that during December and January the night temperatures are considerable lower and the mid-day temperatures higher than during the summer months, descending in January as low as 64 deg. F., and rising as high as 97 deg. F. * * * —A. FENDLER.

ON THE DISTRIBUTION OF CERTAIN PLANTS IN MISSOURI; BY G. C. BROADHEAD. (Concluded from page 53).—*Eupatorium perfoliatum*, L. Boneset. Has only been found in the eastern part of Missouri, as far west as Sullivan county, but not in south-west Missouri.

Silphium terebinthinaceum, L. This plant abounds on prairies in Fayette, Sangamon, Macon, Christian and Montgomery counties, Illinois; is found in southeast Missouri and rarely in north Missouri; observed in Ralls, in Maries, common in Cole, and found southwardly, but not in Western Missouri.

Coreopsis grandiflora, Common in Bates and Vernon, but not found in north Missouri.

Pyrhopappus grandiflorus, Nutt. In Bates, Vernon and eastern Missouri, but not in North or Northwestern Missouri.

Conoclinium celestinum, DC. Abounds in southeast Missouri, is also found in Cole and Bates counties and southwardly. Is a very pretty plant.

Vernonia Arkaniana, DC., I have found in Jasper county, but not North.

Troximon cuspidatum, Pursh. In Jackson and Cass and probably southwardly.

Apogon humilis, Ell. In Cass and Bates.

Boltonia latisquama. I have only found in western and southeast Missouri.

Anphiachyris dracunculoides, DC. Found very abundantly in western border counties of Missouri, chiefly along roadsides.

Grindelia squarrosa, Dunal. I have only found on west line of Vernon, and in Barton and Jasper.

Specularia leptocarpa, Gray. This I have only found on rocky slopes in western counties of Southwest Missouri.

Diospyros Virginiana, L. Not common north but more abundant southwardly. Not found at all in northwest Missouri.

Bumelia lanuginosa, Pers. From Cole southwest to the northwest corner of Barton, but rare; in Jasper is common. In Cole it is a small rough looking bush, growing only on Magnesian limestone slopes; but on Spring River becomes a tree. It is not found north of Missouri River bluffs.

Ilex —? A species with bright scarlet berries along the Mississippi to Lincoln county and up the Missouri to Osage river.

Teroma radicans, Juss. Trumpet creeper. This vine is common in southeast Missouri. Its northern boundary passes from Hannibal south-westwardly via Mexico to Glasgow, thence irregularly by the mouth of Grand River to the southern part of Bates county. Is one of our handsomest vines.

Catalpa bignonioides, Walt. Is a native of southeast Missouri. Its northern limit is St. Francois river, Madison county, although often planted for an ornamental tree further north.

Collinsia violacea, Nutt. Common in the southern part of Bates; is also found further south but not north. It is a very pretty plant.

Pentstemon grandiflorus, Frazer. This beautiful plant has ventured no farther into the State than the northwest part of Atchison county, where I observed it on the side of an almost bare bluff.

Monarda punctata L. Horsemint. This plant abounds on the dry hills of eastern Missouri. An infusion of the leaves is valuable as a sudorific.

Salvia azurea, Lam. Abundant in western Missouri, but not found in the eastern part.

Salvia lanceolata, Willd. Is abundant along roadsides in western Missouri; also found in similar localities in the eastern part of the State.

Salvia lyrata, L., is found in western Missouri.

Phlox acuminata, Pursh. Its northern limit is a short distance on the north side of the Missouri river to Jefferson City, thence to Vernon. It is occasionally found along the streams of southern and eastern Missouri.

Sabbatia angularis, Pursh. Common on dry ridges in Cole county to Vernon and southwardly. It is also found in the eastern counties of northeast Missouri.

Aselepias quadrifolia, Jacq. This plant I have only found in northeast Missouri.

Gentiana quinqueflora, Lam. This pretty Gentian I have only found on damp, shaded hillsides in Adair county.

Gentiana alba, Muhl. Cat. I have only found this in Ralls and Cass.

Gentiana puberula, Michx. This prairie plant is becoming quite rare and is one of our latest fall bloomers.

Solanum rostratum, Dunal. Found in Lafayette, Jackson, Cass and southwardly. Within about ten years has been introduced from the western plains.

Sassafras officinalis, Nees. The common sassafras is very abundant in northeast and southeast Missouri, but is not found in the northwest. Its western boundary passes from Monroe to Saline, thence through the eastern part of Cedar county to the southern part of Jasper. An infusion of the bark is much esteemed for purifying and thinning the blood. It has a pleasant aromatic odor.

Lindera Benzoin, Meisner. Spice bush. This is found along the Missouri as far west as Chariton county, thence southwest to Barton.

Dirca palustris, L. Leatherwood. Found along streams in Madison county. Has also been found on Lost Creek in Warren and near Fulton, Callaway county.

Euphorbia marginata, Pursh. This is found in gardens in western Missouri. It is a native of the western plains.

Phoradendron flavescens, Nutt. Found only in extreme southeast Missouri.

Ulmus alata, Michx. Whahoo elm. This abounds near the Iron mountain growing 40 to 50 feet high; further north it is rare. It is only occasionally found on the Missouri bluffs as far west as Callaway; but does not grow north or west.

Juglans cinerea, L. White walnut or butternut is quite common in eastern and southern Missouri, generally growing on hillsides or rich bottoms. Its northern and western limit is a line from Marion through the western part of Ralls to Mexico, Macon City and Kirksville to the northeast part of Sullivan county; thence to the mouth of Grand River and south-westwardly. Near the mouth of Tabbo creek in Lafayette it is quite abundant, but is neither found west, nor for many miles east.

Carya oliviformis, Nutt. Pecan is found on the Mississippi bottoms as far north as Pike county; on the Missouri it is not so abundant, but is occasionally found as far west as Platte and on Grand River as far as Utica. It is abundant on the Marais des Cygnes and other streams south.

Quercus alba, L. This is not found west of Nodaway River.

Q. imbricaria, Michx. In western Missouri, has not been observed south of Cass county.

Q. bicolor, Willd. Swamp White-Oak. Abundant on rich flat land in eastern and western Missouri, but in the west is not found south of Cass county.

Q. macrocarpa, Michx. A variety is common on hills north of H. & St. Jo. R. R. Further south it is only found on very rich ground or lowlands.

Q. heterophylla, Michx. I have found this oak in Shelby, DeKalb and Sullivan. The tree more nearly resembles *Q. palustris*, DuRoi, to which the leaves bear a resemblance, while others closely resemble those of *Q. imbricaria*, Michx. If a hybrid, it may be of those two. In Sullivan county I found it growing near Black Jack, Black Oak and Laurel Oak.

Fagus ferruginea, Ait. This is said to grow in southeast Missouri. In the north-east portion of Fayette county, Ill., I found two trees only of this species.

Carpinus Americana, Michx. Hornbeam or Water Beech. The northern and western limit extends from Ralls through Pike, Lincoln, Callaway, Boone, Cole and southward.

Betula nigra, L. Red Birch. Its western limit is as follows: through the western part of Harrison via Gentryville to Maysville, thence to Richmond, Ray county, south-erly to Warrensburg, Johnson county, to the Marais des Cygnes, Bates county.

Alnus serrulata, Ait. Alder. A line drawn through Pike, Lincoln, Warren, Cole, and Cedar, would leave the Alder on the south.

Pinus mitis, Michx. Yellow pine. Is common in southern Missouri on flint and sandstone ridges, but does not grow north of the Atlantic & Pacific R. R.

Taxodium distichum, Richard. Cypress. Common only in swamps of southeast Missouri.

Juniperus Virginiana, L. Red Cedar. Is very common in most counties south of the Missouri river, but not so common northwardly and rarely found in western Missouri.

Habenaria leucophæa, Nutt., Western orchis, I have found in Jackson county and some other western counties.

BAPTISIA CALYCOSA, *n. sp.*.—Whole plant smooth except that the mucronate leaflets, stipules, bracts and calyx lobes are sparsely ciliate with long white hairs; stem and slender straight branches somewhat glaucous; stipules lanceolate, acute, persistent, 3-7 ribbed, half as long as the short petioled leaves, the sessile leaflets oblanceolate or obovate, obtuse; racemes terminating the branches, long and loose, the long (1-2 inches) and slender pedicels subtended by ovate lanceolate persistent bracts and also bibracteolate above the middle; calyx tube short, about one-fourth the length of the lanceolate spatulate foliaceous lobes, which are but little shorter than the yellow flowers. Legumes and base of stem not seen.

Dry pine barrens, St. Augustine, Florida.

Collected by Miss Mary C. Reynolds who has distributed many of the rare plants of that vicinity. Most nearly allied to *B. Leonatii* Torr. & Gray, but abundantly distinct from that and other species and remarkable for the ciliate foliage and more especially for the foliaceous calyx lobes.—WM. M. CANBY, *Wilmington, Del.*

A review of the genus being desirable, specimens of all species in flower and fruit will be thankfully received and, if desired, returned. Those from the South and South-West are especially asked for.—W. M. C.

BAPTISIA SULPHUREA, *n. sp.*.—Simple with spreading branches, glabrous; leaves on very short petioles, leaflets obovate, somewhat rhombic, obtuse or occasionally emarginate; stipules small, lanceolate, sub-persistent; spikes rather short with deciduous bracts and sulphur yellow spreading flowers; pedicels shorter than the broad campanulate calyx; broad ovate acutish teeth shorter than tube, woolly inside; style much longer than oval ovary (5 lines long); stipe of globose pod exsert.

Prairies, Tabaksi county, rare, flowers in May. *B. lewantha* differs by its larger growth, deciduous stipules, longer spikes of white flowers which open much later, and longer pedicels, short style (3 lines long) about as long as the linear ovary. *B. sphaerocarpa* is well distinguished from our new species by its caespitose growth, more erect branches, strict spikes with erect deep yellow flowers, pedicels shorter than calyx, the lobes of which are triangular lanceolate, very acute, as long as the narrower tube, and sparingly woolly inside; style much longer than the oval ovary (6 lines long); stipe of pod scarcely longer than calyx. The new species is so much intermediate between the two just mentioned that it suggests the idea of hybridity.—GEO. ENGELMANN.